

SOUTH PACIFIC COMMISSION

TWENTY-THIRD REGIONAL TECHNICAL MEETING ON FISHERIES

Noumea, New Caledonia, 5—9 August 1991

REPORT

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ACRONYMS

ACIAR	Australian Centre for International Agricultural Research
AIDAB	Australian International Development Assistance Bureau
AIMS	Australian Institute of Marine Science
ASEAN	Association of South-East Asian Nations
BDDP	British Development Division in the Pacific
CIDA	Canadian International Development Agency
CRGA	Committee of Representatives of Governments and Administrations
CSPODP	Canada South Pacific Ocean Development Program
CZM	Coastal Zone Management
DSFDP	Deep Sea Fisheries Development Project (SPC)
DWFNs	Distant Water Fishing Nations
EC	European Community
EVAAM	Etablissement pour la valorisation des activités aquacoles et maritimes
FAD	Fish Aggregation Device
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
FFC	Forum Fisheries Committee
FHPP	Fish Handling and Processing Project (SPC)
GPS	Global Positioning System
ICLARM	International Center for Living Aquatic Resources Management
ICOD	International Centre for Ocean Development
IFREMER	Institut français de recherche pour l'exploitation de la mer
IFRP	Inshore Fisheries Research Project (SPC)
IMR	Institute of Marine Resources (USP)
IPFC	Indo-Pacific Fisheries Council
NFC	National Fisheries Corporation (Federated States of Micronesia)
NMFS	U.S. National Marine Fisheries Service
NRIFSF	National Research Institute of Far Seas Fisheries (Japan)

OFCF	Overseas Fisheries Cooperation Foundation (Japan)
ORSTOM	Institut français de recherche scientifique pour le développement en coopération
PIMR	Pacific Island Marine Resources Project (USAID)
PIMRIS	Pacific Islands Marine Resources Information System
PIN	Pacific Island Nation
QDPI	Queensland Department of Primary Industries
RPF	Regional Post-harvest Fisheries Facility
RTFB	Regional Tuna Fisheries Database
RTMF	Regional Technical Meeting on Fisheries (SPC)
RTTP	Regional Tuna Tagging Project (SPC)
SCD	Standing Committee Database (SPC)
SCTB	Standing Committee on Tuna and Billfish
SIG	Special Interest Group
SOPAC	South Pacific Bureau for Applied Geoscience
SPAR	South Pacific Albacore Research Group
SPADP	South Pacific Aquaculture Development Programme
SPOCC	South Pacific Organisations Co-ordinating Committee
SPREP	South Pacific Regional Environment Programme
SPRTRP	South Pacific Regional Tuna Research Project
TBAP	Tuna and Billfish Assessment Programme (SPC)
TPFCC	Trans-Pacific Fisheries Consultative Committee
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
USP	University of the South Pacific
WPFCC	Western Pacific Fisheries Consultative Committee
WPYRG	Western Pacific Yellowfin Research Group

I. INTRODUCTION

The Fourteenth South Pacific Conference (Rarotonga, Cook Islands, 1974) approved the principle of an annual technical meeting on fisheries. The Twenty-ninth South Pacific Conference (Guam, 1989) emphasised the importance member countries attach to this meeting.

The Regional Technical Meeting on Fisheries provides the only opportunity for senior fisheries officers from all member countries to meet and discuss technical aspects of fisheries development, and, through the exchange of experience, ideas and information, to identify mutual needs and problems which can best be met by a regional approach. The meeting directs the work of the Commission's Fisheries Programme by reviewing and commenting on existing or proposed activities, and formulating new initiatives where required.

The Twenty-third Regional Technical Meeting on Fisheries was held at South Pacific Commission headquarters, Noumea, New Caledonia, from 5 to 9 August 1991.

II. AGENDA

1. **Opening formalities**
 - 1.1 Opening address
 - 1.2 Administrative arrangements
 - 1.3 Adoption of agenda and timetable
 - 1.4 General introduction SPC Fisheries Programme
2. **SPC Fisheries Programme review – open day display**
3. **SPC Tuna and Billfish Assessment Programme (TBAP) review**
 - 3.1 Tuna and Billfish Assessment Programme – overview
 - 3.2 Regional Tuna Tagging Project
 - 3.3 Tuna Research Project
 - 3.4 Fisheries Statistics Project
 - 3.5 Albacore Research Project
 - 3.6 Report of Fourth Standing Committee Meeting on Tuna and Billfish
 - 3.7 Draft TBAP Strategic Research Plan, 1992–1996
 - 3.8 Report on SPAR/ 3rd South Pacific Albacore Consultation
 - 3.9 Report of Yellowfin Research Group
4. **SPC Coastal Fisheries Programme review**
 - 4.1 Overview
 - 4.2 Deep Sea Fisheries Development Project
 - 4.3 Gear Development Sub-Project
 - 4.4 Offshore Fisheries Development Sub-Project
 - 4.5 Regional Purse Seine Test Fishing Sub-Project
 - 4.6 Inshore Fisheries Research Project
 - 4.7 Fisheries Information Project
 - 4.8 PIMRIS Steering Committee and progress report
 - 4.9 Fish Handling and Processing Project
 - 4.10 Women's Fisheries Development Sub-Project
 - 4.11 Report on Latin American study tour
 - 4.12 Post-harvest fisheries facility – progress report
 - 4.13 Fisheries Training Project
5. **Human Resource Development in Pacific Island Fisheries**
 - 5.1 Report of SPC/ICOD Human Resource Development Study
 - 5.2 USP Marine Studies Programme Five-Year Plan
 - 5.3 Establishment of a certificate-level training programme in Fisheries Studies
 - 5.4 Co-ordination of fisheries training activities
6. **One-day Workshop: People, Society and Pacific Islands Fisheries Development and Management**
 - Introduction, workshop aims and outline
 - Traditional systems of resource management and control in the 20th century – case studies worldwide
 - An overview of customary systems of marine resource management in Oceania, and ways in which these can be put to use in today's fisheries management context
 - Applying traditional knowledge of marine resources to their management
 - Developing a resource management system in Palau

- Traditional knowledge and management of marine resources in Tokelau
- Fisheries development in Papua New Guinea – involving the people
- Conflict resolution in the development of the Cook Islands pearl industry
- Other country interventions
- Improving opportunities for women to participate in the development process
- Fisheries as a part of integrated rural development
- The role of extension and communication skills in fisheries development
- Future needs in research on, and application of, traditional and social systems and knowledge in the Pacific
- Recommendations for action in this area by national and international agencies

7. Aquaculture and marine resource enhancement

- 7.1 Introductions of marine species in the Pacific
- 7.2 Quarantine protocols for the transfer of biological material from aquaculture facilities
- 7.3 SPC/ SPADP Reef Reseeding Project
- 7.4 Trochus reseeded experiment
- 7.5 Enhancement of spiny lobster populations through habitat modification
- 7.6 Fifth International Conference on Artificial Habitats for Fisheries

8. Development of Pacific Island pearl oyster resources

- 8.1 Study tour of Polynesian pearl culture facilities
- 8.2 Pearl oyster genetics and transplantation
- 8.3 Histological study of pearl formation
- 8.4 Pearl marketing study

9. Issues relating to safety at sea in Pacific Island fisheries

10. Reports by other organisations

11. Other business

12. Closing formalities

III. SUMMARY OF DISCUSSIONS

AGENDA ITEM 1 – OPENING FORMALITIES

1.1 Opening address

1. The Secretary-General, Mr Atanraoi Baiteke O.B.E., formally opened the Meeting, welcomed the delegates, outlined the history of the South Pacific Commission's Fisheries Programme and thanked the former SPC Fisheries Co-ordinator, Mr B. Smith, for the work done during his period of service. The Secretary-General also expressed his appreciation to Mr A. Robertson, who was formerly in charge of fisheries training activities, and congratulated Mr J. Dashwood on his appointment to the position of Fisheries Co-ordinator.

2. The Secretary-General then went through the Agenda, laying special stress on the Open Day Display and expressing the hope that this initiative would lead to a new understanding and a more direct presentation of programme activities.

3. The Secretary-General underlined the importance of the Meeting's discussions and recommendations, pointing out that the recommendations made by previous Regional Technical Meetings on Fisheries had always been endorsed by the CRGA and approved by the South Pacific Conference.

1.2 Administrative arrangements

4. In accordance with the procedure of rotating the chairmanship alphabetically between member countries, Dr Tim Adams of Fiji was appointed Chairman while Mr Philippe Siu of French Polynesia was appointed Vice-Chairman and Chairman of the Drafting Committee.

5. The Chairman briefly outlined the administrative arrangements for the Meeting.

6. The Representative of France thanked the SPC Secretariat for its efforts in preparing the Meeting but deeply regretted inadequacies in the French translation services which resulted in the French translation of some working papers being available only half an hour before the beginning of the Meeting. This was a handicap for the French-speaking experts, preventing them from participating fully in the discussions.

7. In reply, the Director of Programmes explained that this was a permanent and widespread problem within the Secretariat and that, to keep pace with an increasingly heavy schedule of meetings, three additional posts would need to be established in the Interpretation/Translation Section.

8. The Representative of France requested that his remark be included in the report so as to be brought to the attention of the CRGA.

1.3 Adoption of agenda and timetable

9. The Chairman introduced the Draft Agenda, which was adopted with a minor amendment to item 7.1.

1.4 General introduction to SPC Fisheries Programme

10. The Director of Programmes introduced Working paper 1, noting the establishment of a post of Coastal Fisheries Programme Manager, which had become necessary because of the expansion of the work programme, and explaining the structure of the Fisheries Programme.

11. The Director of Programmes drew the Meeting's attention to the three fisheries projects submitted for EC funding:

- South Pacific Regional Tuna Research Project (ECU 5,000,000)
- Regional Purse Seine Test Fishing Project (ECU 4,000,000)
- Regional Post-Harvest Fisheries Facility (ECU 1,580,000)

12. The Director of Programmes asked the Meeting to put these projects in order of priority, since EC funds were limited. A discussion ensued during which it was agreed that the three projects would be considered in detail in the course of the Meeting.

AGENDA ITEM 2 – SPC FISHERIES PROGRAMME REVIEW – OPEN DAY DISPLAY

13. Participants were invited to examine the open day displays, demonstrations and videos on SPC Fisheries Programme activities, and to discuss these in detail with the staff members responsible.

AGENDA ITEM 3 – SPC TUNA AND BILLFISH ASSESSMENT PROGRAMME (TBAP) REVIEW – PLENARY DISCUSSION SESSION

3.1 Tuna and Billfish Assessment Programme – overview

14. The Chief Fisheries Scientist gave an overview of the work of the Tuna and Billfish Assessment Programme, emphasising its achievements since the last RTMF and likely future directions. He first outlined the objectives and activities of the main field activity, the Regional Tuna Tagging Project, which is likely to be extended by five months until about mid-1992. The activities of the Tuna and Billfish Research Project had been greatly strengthened by improved data coverage of fleets, including historical data from U.S. tuna fishing vessels. The Fisheries Statistics Project was continuing to provide timely data through the *Regional Tuna Bulletin* and support the development of in-country databases. Thanks to the recruitment of a Senior Fisheries Scientist funded by ICOD, the Albacore Research Project project had become one of the TBAP priority activities. The activities of these projects were described in detail in Working Papers 2, 3, 4 and Information Paper 1. The Programme would be guided over the next five years by the Strategic Plan.

15. The Chief Fisheries Scientist noted that it had been difficult to secure ongoing funds for the TBAP and the Programme remained under strength. It was hoped that substantial Lome IV funding would be forthcoming from the EC to support a Regional Tuna Research Project. He thanked ICOD, AIDAB and NMFS for their assistance in providing scientists on secondment, or supporting recruitments to assist TBAP. The need to involve resource users in funding tuna research in the longterm was noted.

16. The Chairman underlined the importance to the region of the resource studied by this programme, whose sheer size was often underestimated (1.3 million tonnes of tuna fished last year).

17. The Representative of Kiribati thanked the Programme team for its work and asked what sort of relationship existed between TBAP and the U.S. Multilateral Treaty. A discussion ensued on these technicalities.

3.2 Regional Tuna Tagging Project

18. After briefly outlining the history and goals of this project, the Principal Fisheries Scientist presented the tagging results to date: the total number of fish tagged and released now stood at nearly 90,000, including 25,000 yellowfin, more than 60,000 skipjack and about

1,200 bigeye tuna. The original goal of 40,000 skipjack was already exceeded and the goal of 40,000 yellowfin was expected to be reached by the end of the project. To date, 7,000 tags had been recovered, representing about an eight per cent recovery rate for each of the three species. The Principal Fisheries Scientist considered that the recapture rate could be between 10 and 15 per cent by the time most tags had been recovered.

19. It was mentioned that most of the tags were returned from purse seiners. The Principal Fisheries Scientist felt that tag returns from longliners should start shortly. He requested participants to ask captains of longliners operating in their respective countries to co-operate with the Project by returning any tags recovered.

20. On completion of the tagging field work (mid-1992) the project's focus would become the analysis of the data collected. This work was likely to extend over two years but TBAP expected to be in a position to present preliminary results to the next RTMF.

21. The Representative of Australia congratulated the TBAP team and sought clarification on the rate of non-reporting. The Principal Fisheries Scientist responded that the TBAP was carrying out tag-seeding on U.S. purse seiners in Pago Pago but preliminary results suggested that the reporting was incomplete. Recent returns of seeded tags had increased, but it would be premature to draw any conclusion before an in-depth analysis had been carried out.

3.3 Tuna Research Project

22. The Principal Fisheries Scientist described stock assessment work carried out by the TBAP, of which details were given in Working Paper 2. The total tuna catch in the Western Pacific for 1990 was 1.3 million tonnes, over an area including the Philippines and Eastern Indonesia. CPUE trends appeared to be stable and no stock seemed over-exploited, although there was uncertainty as to whether current yellowfin catches (330,000 tonnes) could be sustained. Western Pacific skipjack catches totalled 800,000 tonnes and there was reason to believe that a catch of one million tonnes per year was sustainable without any risk of significant stock depletion.

23. In 1991 confidential country reports assessing national existing tuna resources had been carried out for the Federated States of Micronesia and for Kiribati. Two further assessments, for Papua New Guinea and Fiji, were scheduled for 1991.

3.4 Fisheries Statistics Project

24. The Chief Fisheries Scientist reported on this project, in the absence of the several officers in charge of it, and referred participants to Working Paper 2. The Project covered four main areas of activity:

- (a) Maintenance of the Regional Tuna Fisheries Database (100,000 daily records entered, plus 100,000 received on tape from, among others, Australia, Solomon Islands, French Polynesia and NMFS). Some U.S. historical data were acquired and a major editing task on historical longline data undertaken;
- (b) Continuing timely publication by SPC of the quarterly *Regional Tuna Bulletin*;
- (c) Assisting member countries with the development and support of national fishery statistics systems. On a pilot basis, Federated States of Micronesia (Micronesian Maritime Authority) is being encouraged to begin data entry and verification as an approach to achieving self-sufficiency in the long term;
- (d) Providing statistical support to other SPC fisheries projects.

25. The Representative of New Zealand congratulated the project team on the quality of the work carried out.

3.5 Albacore Research Project

26. The Senior Fisheries Scientist outlined the history of albacore fisheries, noting that there was some uncertainty as to the productivity of this resource. Since the research project's inception, its overall objective had been to advise South Pacific countries on matters relating to development and sound management of the resource. As a result, much effort was currently being focused on determining the structure of albacore stocks, and on developing appropriate analytical models to assess interaction between fishing fleets and to estimate sustainable long-term catches.

27. During the 1990–91 fishing season, albacore tagging had been carried out by TBAP in conjunction with the New Zealand Ministry for Agriculture and Fisheries. About 3,000 albacore were tagged, mainly in the Subtropical Convergence Zone.

28. In view of the magnitude of the analytical work to be undertaken, the holding of a modelling workshop was being considered. This might take place during 1992–93, once a substantial amount of information had been collected.

3.6 Report of Fourth Standing Committee Meeting on Tuna and Billfish

29. The Chairman of the Meeting, who had also chaired the Fourth Standing Committee Meeting on Tuna and Billfish, asked participants to refer to Working Paper 3 and to consider the two recommendations made on page 18 therein.

30. During the discussion that followed the Representative of Kiribati asked whether the present meeting was entitled to adopt the proposed recommendations. The Representative of Western Samoa expressed the view that these recommendations were in fact merely suggestions addressed to the RTMF by the Standing Committee.

31. The Representative of Australia proposed that the Meeting adopt the recommendations as formulated by the Standing Committee.

32. The Representative of New Zealand felt that TBAP objectives needed to be clear and well defined; the question was who had a mandate to authorise an increased workload; he suggested that the decision rested with the RTMF.

33. The Representative of American Samoa supported the two previous speakers, saying that the recommendations were clearly aimed at this Meeting and it was up to this Meeting to decide on them.

34. During this discussion, the Representative of France asked that the detailed operational plan for 1992–1996 be fully translated into French. He said that it was most unfortunate that only the recommendations and action items of the Fourth Standing Committee Draft Report had been translated. In reply, the Chairman referred back to the comment made earlier by the Director of Programmes noting the need for a staff increase in the Interpretation/Translation Section.

35. The Chairman asked representatives whether the recommendations were acceptable in substance or whether they needed to be reformulated. There being no objection, the Chairman considered that the recommendations had been adopted by the Meeting as follows:

Recommendation No. 1

In order to facilitate the role of the Standing Committee on Tuna and Billfish in providing technical review of the work of the Tuna and Billfish Assessment Programme for the RTMF, the Meeting endorsed the recommendation of the Fourth Standing Committee on Tuna and Billfish that the Tuna and Billfish Assessment Programme prepare and distribute to Standing Committee on Tuna and Billfish members prior to each meeting:

- a detailed description of any proposed new activities,**
- a projected work plan for the year.**

Recommendation No. 2

The Meeting endorsed the recommendation of the Fourth Standing Committee on Tuna and Billfish that a detailed operational plan for 1992–1996 be developed by the Tuna and Billfish Assessment Programme and distributed in advance of the Fifth Standing Committee on Tuna and Billfish for evaluation by that meeting.

3.7 Draft TBAP Strategic Research Plan, 1992–1996

36. The Representative of Australia, as spokesman for the Standing Committee on Tuna and Billfish Strategic Plan drafting group, referred to Working Paper 4. He briefly outlined the work done by the TBAP over the last ten years and the many changes that had occurred in fisheries over this time, and detailed the objectives and strategies of the five-year Plan for consideration by the Meeting. The Chairman invited participants to comment on the five-year Draft Plan.

37. The Representative of Kiribati asked the rapporteur where interaction between fisheries was specifically referred to in the Plan. Following a lengthy discussion on interaction between fisheries, the Representative of New Zealand expressed the view that this paper should be regarded as giving guidelines that provide for a number of key research activities, including interaction between fisheries.

38. The Representative of Kiribati expressed his concern that TBAP should take into account the development of fisheries in the region. The Chairman pointed out that the Plan was sufficiently flexible to take account of the present status of fisheries, through it was impossible to predict future developments. The Representatives of the United States and Australia noted that the Plan would be taking into account interaction between fisheries. The Representatives of France and New Zealand emphasised that the scope of the Plan was very wide.

39. The Chairman proposed that the Plan be accepted as an overall framework into which specific activities could be integrated. There were no objections and the Plan was adopted.

3.8 Report on SPAR/Third South Pacific Albacore Consultation

40. The Chairman outlined the content of the report and gave the background of the South Pacific Albacore Research Workshop. He informed participants that the next workshop would be held in Taiwan, which was partly funding the meeting.

41. The Representative of the Forum Fisheries Agency recalled that during the Third Consultation on Arrangements for South Pacific Albacore Management no consensus had emerged. However, Japan had submitted a Draft International Agreement.

3.9 Report of Yellowfin Research Group

42. The Representative of New Zealand, as Chairman of the Yellowfin Research Group, summarised the proceedings of the Group which met in June 1991 in Port Vila, Vanuatu, to assess current trends in the fishery. On the basis of the as yet incomplete data available, there was currently inconclusive evidence that the species was being overfished at the present time although recent harvests had raised concerns. He noted that the Regional Tuna Tagging Programme would improve this situation by producing information on stock size and interactions as well as other necessary data.

43. In response to a query from the Chair, the Chief Fisheries Scientist announced that the report of the Research Group would be published by the end of September 1991. He went on to underline the importance of co-operation between institutions and of provision of data by the countries involved, in order to fill the information gap. All the available data on yellowfin would be compiled and considered at the next meeting of the Research Group to be held in Hawaii in 1992 under the Chairmanship of Mr Gary Sakagawa (NMFS).

44. In reply to a query from the Representative of Western Samoa concerning billfish, the Chief Fisheries Scientist explained that whilst billfish catches were routinely monitored, directed research on billfish was not a priority task, given the relatively minor contribution to overall catches. The growing importance of recreational catches of billfish was recognised. The billfish data stored in the SPC Regional Database might therefore be analysed by an Australian scientist from AIMS who might be joining the TBAP staff for a short-term attachment.

AGENDA ITEM 4 – SPC COASTAL FISHERIES PROGRAMME REVIEW

4.1 Overview

45. The Senior Inshore Fisheries Scientist introduced Working Paper 5, enumerating the five integrated projects carried out under the Programme.

4.2 Deep Sea Fisheries Development Project

46. The Fisheries Development Officer described the work carried out under the Project during the past year, which included eight distinct field operations. He stressed key aspects of this work conducted under the common theme of FAD and offshore fishing capability development. Preparation of a FAD handbook had been a major activity of the project.

47. Three masterfishermen (T. Rata, P. Watt and P. Wellington) were at present working with the Project. Two other people had also worked under the Project during the year: A. Desurmont on site assessment and FAD deployment in the Cook Islands and P. Gates on preparation of the FAD handbook.

4.3 Gear Development Sub-Project

48. SPC masterfisherman P. Watt described this sub-project and explained the work that had been done in Western Samoa on vertical longline fishing. A video film illustrating the project was shown to participants.

49. Some technical discussion ensued on aspects of the project, during which it was pointed out that a handbook on this fishing technique would be produced, and that this would be supplemented by a video-film describing all its technical aspects.

50. The Representative of Western Samoa thanked SPC for making the masterfisherman available.

4.4 Offshore Fisheries Development Sub-Project

51. The Fisheries Development Officer outlined the overall aims of the project, which, in its initial phase, would focus on FADs. This project would cost some US\$860,000 over a period of four years and had been submitted to the United Nations Development Programme (UNDP), which had in turn sought country comment on this and other proposals during the tripartite review committee held in conjunction with the Forum Fisheries Agency. The project was strongly supported by countries participating in the June 1991 Mini-MAC, and the Secretariat hoped it would be approved for funding by UNDP in the first quarter of 1992.

52. The Representatives of Palau and Western Samoa said that this project as presented appeared to meet the needs of island countries effectively.

53. In response to the concern expressed by the Representative of Kiribati about a possible increase in fishing pressure on inshore resources, the Fisheries Development Officer pointed out that this was not the intention, although the Project would in part target deep-bottom stocks not at present being fished, such as those on offshore banks and seamounts.

54. The Representative of New Zealand queried the appropriateness of project submission to aid donors without prior approval from the Meeting. The Secretariat explained that there were constraints relating to meeting dates and funding cycles, that the submission to UNDP had been a preliminary one provided on invitation, that the Fisheries Departments of SPC member countries had received the document, and that nine countries had supported its submission. The Representative of New Zealand emphasised that he was not against the project and that he well understood the constraints of funding cycles, but suggested that a mechanism was required to ensure that the technical review of such projects be implemented in future.

55. The Chairman proposed that this matter be further discussed under Agenda Item 11 – Other Business.

4.5 Regional Purse Seine Test Fishing Sub-Project

56. The Senior Inshore Fisheries Scientist summarised the project's objectives, emphasising the difficulties encountered so far in securing funds (about us\$ 4 million over two years).

57. This project was one of the three that SPC had submitted to the EC for funding. The Representative of New Zealand reminded participants that the Director of Programmes had indicated earlier the need for these projects to be put in order of priority before the end of the Meeting and questioned whether country representatives would have enough information to decide priorities.

4.6 Inshore Fisheries Research Project

58. The work of this Project was presented by the Inshore Fisheries Scientist, who thanked the United Kingdom Government for its continued financial support to the Project. The Inshore Fisheries Scientist briefly summarised the key project activities described in Working Paper 5, as follows:

- Marshall Islands : Namorik pilot pearl-oyster culture project (with FFA/USAID funding);
- Papua New Guinea : fishery data analysis and report production;
- Tonga : analysis of catch, effort and length frequency data from the Tongan deep slope fishery;
- Palau : quantification of marine habitats;

- Papua New Guinea : bêche-de-mer research;
- Federated States of Micronesia : Yap reef fish depletion experiment;
- Palau : development of inshore fishery management plan;
- Analysis of SPC bottom fishing data (the final document will be published as a technical report in 1991);
- Ciguatera research (a regional database had been set up and the Inshore Fisheries Scientist would attend the Fifth International Conference on Ichtyosarcotoxism);
- Development of remote sensing applications for inshore fishery resource assessment (techniques used for the Palmerston Atoll survey and the Tonga bêche-de-mer survey);
- Workshop on Trochus Resource Assessment, Development and Management.

59. Discussions at the Workshop on Trochus Resource Assessment, Development and Management had led to four main recommendations, as noted in paragraph 45 of Working Paper 5. The Representative of the Cook Islands proposed a minor amendment to the wording of the third recommendation. The Representative of Australia supported the Workshop recommendations and asked whether any specific stock assessment studies of benthic invertebrates were being undertaken by the Inshore Fisheries Research Project.

60. The Inshore Fisheries Scientist and Senior Inshore Fisheries Scientist responded by noting that although invertebrate resource assessments had been carried out on a number of occasions, these had mainly been rapid surveys to provide standing stock estimates in response to particular, urgent management needs. The proposed study of the Aitutaki trochus fishery would provide an opportunity to undertake more detailed population modelling.

61. The Meeting then adopted the following recommendations based on those formulated during the workshop:

Recommendation No. 3

The Meeting recommended that the South Pacific Commission assist Pacific Island countries to make use of remote sensing and image processing in survey work on trochus and other marine resources, especially benthic invertebrates.

Recommendation No. 4

The Meeting recommended that the South Pacific Commission establish a new Special Interest Group (SIG) on shells and the shell trade, focusing especially on trochus.

Recommendation No. 5

The Meeting recommended that the South Pacific Commission carry out a detailed study of the Aitutaki trochus fishery as a case study, in order to provide management-related information that will be applicable to the developing fisheries in other atolls of the region.

Recommendation No. 6

The Meeting recommended that the South Pacific Commission encourage the adoption of standardised survey techniques for trochus and other benthic marine invertebrates in Pacific Island countries, so as to enable comparison of results by different workers and from different areas.

62. The Representative of Papua New Guinea thanked the SPC for the funds made available and the Project for its assistance with report preparation. Further assistance would be needed for some of the reports still outstanding.

63. The Representative of Western Samoa sought clarification on the role and involvement of SPC in the proposed new Special Interest Group referred to in Recommendation No.4. The Inshore Fisheries Scientist explained that this Special Interest Group did not entail any significant additional financial outlay. Its objective was to stimulate exchange of information and communication between specialists working on shells and the shell trade.

4.7 Fisheries Information Project

64. The Fisheries Information Officer briefly described his work and outlined the project's main components:

(a) *In-country activities:*

- The Project had helped the Kiribati Fisheries Division to produce its 1989 annual report.

(b) *Regional activities:*

- Special Interest Groups: three had already been established, on bêche-de-mer, pearl oysters and ciguatera; new groups would be established shortly on trochus and the shell industry, resource enhancement, and FADs;
- The *Fisheries Newsletter* was now published regularly and on time, and was widely circulated in the region;
- Other publications included a selective bibliography on pearl oysters, prepared by consultant N. Sims;
- Requests for information: every effort was made to meet all requests promptly and, when necessary, the Pacific Island Marine Resources Information System (PIMRIS) was called on for additional information.

65. New work was being planned, including an update of the *Fisheries Directory of the South Pacific Commission Region* to describe briefly the status of fisheries in each province, state, country or territory of the region.

66. The Fisheries Information Officer thanked the French Government for its initial funding of the Project, but underlined the financial constraints which were threatening the Project's future.

67. The Representative of Kiribati thanked the Fisheries Information Officer for the assistance provided to his country's Fisheries Department. The Representative of New Zealand commended the Project for the professional quality of the report and asked whether future annual reports would be produced by the Project or by the Kiribati Fisheries Department. The Representative of Tuvalu asked whether the Project could assist in producing reports for other countries.

68. The Fisheries Information Officer answered that the Project had well defined goals, namely producing the information bulletins of the Special Interest Groups and the *Fisheries Newsletter* and responding to requests for information, and that these activities had to be given priority. Future assistance to member country Fisheries Departments in the production of annual reports could always be envisaged but would probably be limited by financial and manpower constraints.

69. The Fisheries Information Officer added that the Kiribati report was originally produced by the Kiribati Fisheries Division in only six copies, for internal distribution only. The assistance provided by SPC was in upgrading the presentation of the report and promoting a wider distribution in the region of the valuable information it contained. He emphasised that the vast majority of the work involved in producing such a report was the compilation of the original data and accompanying explanatory text. This would still have to be done by the fisheries department concerned.

4.8 PIMRIS Steering Committee and progress report

70. The PIMRIS Co-ordinator referred participants to Working Paper 9. After outlining the background and aims of PIMRIS, the Co-ordinator reviewed the work carried out over the past year. At national level, PIMRIS services had been provided to American Samoa, Cook Islands, Kiribati, Niue, Palau, Tuvalu, Tonga and Western Samoa in connection with setting up of databases and training. Training courses on the use of databases would be organised in Vanuatu and Western Samoa.

71. The Co-ordinator thanked the senior officers of fisheries departments who had attended the PIMRIS Steering Committee Meeting held in Noumea from 1 to 2 August 1991, and assured them that all their comments would be taken into account. He hoped that attendance by Fisheries Officers at future committee meetings would be even larger.

72. The Co-ordinator invited the Meeting to consider and comment on the recommendations included in the PIMRIS Steering Committee Report (Working Paper 9 pages 6 and 7) and adopt those it saw fit.

73. The Chairman pointed out that recommendation No.5, dealing with problems caused by the high cost of telecommunications in the region, concerned SPC member governments rather than the Meeting itself. He urged delegates to raise this matter with their own governments, perhaps with a view to encouraging discussion of this issue at the forthcoming South Pacific Conference (Tonga, October 1991), whose theme would be 'Telecommunications'.

74. The Chairman further proposed that recommendations Nos. 7 and 8, both of which concerned funding arrangements for the SPC Fisheries Information Project, could be combined for possible consideration and adoption by this meeting.

75. The PIMRIS Steering Committee's recommendations were endorsed by the Meeting, which also formulated the following recommendation:

Recommendation No. 7

The Meeting recommended that the South Pacific Commission request the Government of France to provide continued support for the SPC component of the PIMRIS project, and continue its attempts to identify funding for long-term attachment of national information officers to the Project as a means of establishing and strengthening national-level PIMRIS activities.

76. The Representatives of Tuvalu, Western Samoa, American Samoa and Palau extended their appreciation to PIMRIS for the work done in their respective countries, while the Representative of Palau sought and received clarification on how to use PIMRIS services more effectively.

4.9 Fish Handling and Processing Project

77. The Post-harvest Fisheries Adviser thanked the United Kingdom Government, and in particular BDDP, for its constant support and financial assistance. He also extended thanks to ICOD for funding support.

78. He referred participants to Working Paper 5 and presented the Project's activities over the past year, which had included the setting up of a tuna processing and marketing trial project in Tokelau. The Post-harvest Fisheries Adviser emphasised the economic importance of this type of project for isolated countries possessing very few exportable products.

79. The Representative of Tuvalu enquired whether SPC would be able to set up a similar project in his country. The Post-harvest Fisheries Adviser stressed the importance of identifying the product properly and investigating potential markets before launching any such project. In this connection, he mentioned the planned collaborative project between SPC and ACIAR for developing and marketing novel tuna products and encouraged the participation of Tuvalu.

80. The Representative of Kiribati requested clarification on this collaborative project. The Post-harvest Fisheries Adviser explained that the object of the project was to manufacture high-quality tuna-derived products using the simplest technology possible, with marketing trials being conducted within the project framework in Australia.

81. The Representative of Tokelau thanked the SPC for its assistance in implementing the tuna processing project.

82. The Post-harvest Fisheries Adviser informed the Meeting that a six-week training course would be held in January 1992. The training given would encompass technical, extension and communication skills.

4.10 Women's Fisheries Development Sub-Project

83. The Post-harvest Fisheries Adviser advised the Meeting that this project had effectively started in May with the appointment of the SPC Women's Fisheries Programme Officer, a position funded by ICOD. The Project would oversee the implementation of projects for women from coastal communities.

84. Most of the Sub-Project's initial activities would continue to be in Papua New Guinea, where a number were already under way, or planned. A workshop on fish processing and marketing, designed for New Guinea Islands Region women, was scheduled for September 1991.

85. A sub-regional meeting was to be organised next year to discuss women-in-fisheries projects. Solomon Islands and Vanuatu had also expressed interest in this meeting.

4.11 Report on a study tour to Latin America

86. Mr Satalaka Petaia, from the Tuvalu Fisheries Division, one of the four-man study team, reported on this tour which was organised in April 1991 to Mexico, Ecuador, Peru and Chile. The general objectives of the study tour were to explore areas of post-harvest fisheries technology and expertise in these countries and to evaluate the potential for utilising this expertise in the Pacific Islands.

87. The study tour participants had noted several areas of potential value to the Pacific Islands and identified a number of potential collaborative projects.

88. Mr Petaia thanked CIDA for funding this study tour through the TPFCC. The Representative of WPFCC/TPFCC announced that funds would be available for project implementation.

89. The Representative of Palau commended the study tour members for the success of their mission and asked when the final report would be available. The Chairman expressed the wish that the report be printed without delay.

4.12 Post-harvest Fisheries Facility – progress report

90. The Representative of Kiribati, as Chairman of the planning group, referred participants to Working Paper 12 which reported on the progress of this project. The Meeting was advised that the planning group would convene again very shortly to consider the funding dossier that would ultimately be submitted to the EC.

4.13 Fisheries Training Project

91. The Fisheries Training Associate advised the Meeting that after experimentally locating the Project in Suva for over a year, SPC management had decided to transfer the Project back to SPC Headquarters in Noumea.

92. The Fisheries Training Associate referred participants to Working Paper 5 and described the training activities conducted by the Project during the past year. These had included:

- The extension training project;
- The 12th SPC/Nelson Polytechnic Pacific Island Fisheries Officers Course;
- The FAO/UNDP/SPC Organisational Management Workshop for Senior Fisheries Personnel;
- The SPC Human Resource Development Survey; and
- The production of fishing techniques and training videos.

93. He then outlined planned future activities such as post-harvest fisheries training, production and distribution of a revised directory of training opportunities, and possibly a distance course on report writing.

94. The Representative of Palau expressed his appreciation of the Project's activities and wondered whether the project's transfer back to SPC Headquarters would affect the organisational aspects of the navigation course scheduled to begin in Suva on 2 September 1991, which a trainee from Palau would be attending. The Fisheries Training Associate replied that every effort would be made to ensure that the Palau trainee's participation in this course was not adversely affected by the relocation.

95. The Representative of Western Samoa sought clarification on the Project's role in co-ordination of training activities within the other SPC Fisheries Projects. The Senior Inshore Fisheries Scientist explained that the Project had been set up precisely to co-ordinate fisheries training activities within the Commission's Fisheries Programme. A number of factors, including communication problems between Suva and Noumea, had prompted the Project's return to SPC headquarters.

96. The Representative of Vanuatu proposed that his country host the practical module of the next SPC/Nelson Polytechnic Fisheries Officers Course and asked the Meeting to approve this. The Senior Inshore Fisheries Scientist, on behalf of the South Pacific Commission, thanked the Representative of Vanuatu for his offer. Following this proposal, the Meeting adopted the following recommendation:

Recommendation No. 8

The Meeting recommended that the Secretariat make all the necessary arrangements to enable the practical module of the SPC/Nelson Polytechnic Pacific Island Fisheries Officers Course to be held in Vanuatu in 1992.

97. In conclusion to this section of the Agenda, the Senior Inshore Fisheries Scientist underlined the high level of co-ordination presently occurring between the various SPC Fisheries Projects.

AGENDA ITEM 5 – HUMAN RESOURCE DEVELOPMENT IN PACIFIC ISLAND FISHERIES

5.1 Report of SPC/ICOD Human Resource Development Study

98. The Chairman gave the background to the Study which was undertaken following a recommendation from the Twenty-second Regional Technical Meeting on Fisheries. The Co-ordinator of the Study, Mr Paul Sutherland, then presented the report, entitled *Human Resource Development and Planning in the Pacific Islands Fisheries Sector* (Working Paper 6). The Study was funded by ICOD.

99. The Representative of Western Samoa enquired whether the role of the meeting was simply to examine the report or to approve it. He noted that the 22nd RTMF had appointed a special review group including one representative from each region (Polynesia, Melanesia and Micronesia) and asked whether this group had examined the report.

100. The Representative of the Nelson Polytechnic, Mr A. Robertson, who was a member of the survey team, explained that because of administrative and financial problems, the study had started only in January 1991. A preliminary report had been presented at the Forum Fisheries Committee Workshop on Education and Training held in Wellington in April 1991. After thorough consideration by the Forum Fisheries Agency, the SPC Secretariat had decided to submit the completed report directly to the 23rd RTMF.

101. Mr Sutherland gratefully acknowledged the co-operation and hospitality extended to the survey team in all the countries visited, adding that he would appreciate any comments the Meeting wished to make on Working Paper 6 and its appendices. He pointed out that the main body of the report included 47 recommendations of national, regional and general scope, while the 16 country appendices contained a further 109 recommendations directed specifically at the national level.

102. The Chairman, as Representative of Fiji, noted that he regarded the report as an extremely valuable document, asked the Meeting whether it would approve it in principle, and called for comments.

103. The Representative of Palau informed the Meeting that his country was preparing a Fisheries Management Plan and indicated that the report would be very useful for the section dealing with human resources.

104. The Representative of France stated that his country would like to be more actively involved in training projects, particularly in 'training of trainers'. The Representative of New Caledonia advised the Meeting that a 'School of Trades related to the Sea' had been opened in Noumea at the beginning of the year and would welcome trainees from countries in the region.

105. A discussion ensued concerning procedure, and it was decided to defer approval of the report until the recommendations had been considered in detail. The Meeting agreed that adoption of the report take place after the report was fully discussed by members.

106. The Senior Inshore Fisheries Scientist suggested that the recommendations should be recapitulated in a paper that would be distributed by Thursday, so as to facilitate further consideration and discussion by the Meeting. Following a general consensus, the Chairman adjourned these discussions to Thursday.

107. When discussion resumed, Mr Paul Sutherland introduced Addendum 1 to Working Paper 6.

108. The Representative of American Samoa sought clarification on recommendation No.14, specifically how the activities of the proposed Training Co-ordinator would be different from those of the SPC Regional Fisheries Training Project. In reply, Mr Sutherland noted that some of the duties assigned to the Co-ordinator were already part of on-going activities, in particular

the development of a regional fisheries personnel database. Mr Robertson suggested that the position of Training Co-ordinator should be viewed as having functions that are distinct from, and broader than, those of any one existing regional organisation.

109. Of particular concern to the Meeting was the possible duplication of functions already incorporated in the Fisheries Education and Training Adviser position in SPC. Of further concern was the possible duplication of training activities in other regional organisations.

110. After discussion it was agreed that there was an obvious need for regional co-ordination of existing and future training activities. The following recommendation was adopted by the Meeting:

Recommendation No. 9

The Meeting accepted that there was a need for improved co-ordination of education and training in the fisheries sector within the region. The Meeting recommended that SPC, by the most appropriate means and as soon as possible, obtain the views of donors, educational institutes and regional agencies, in order to determine how best to achieve that improvement, and report to member governments on the outcome of these consultations.

111. It was suggested that the establishment of a Training Co-ordinator position, and the relationship of this post to the present activities of regional organisations, could most appropriately be discussed by SPOCC.

112. After lengthy discussions on the appropriateness of, and suitable mechanisms for, publishing the individual country reviews as appendices to the main study report, the meeting adopted the following recommendation:

Recommendation No. 10

The Meeting recommended publication of the regional report of the Human Resource Development Study in the form of an SPC technical publication, and publication of the country reports, subject to authorisation from governments within a period of 12 weeks. As many of the recommendations of the report lie beyond the scope of the RTMF to address, it was further recommended that the report be distributed widely within the region (government central agencies, donors, educational institutions, education departments) and that SPC seek the views of these recipients on the value of the recommendations.

5.2 USP Marine Studies Programme Five-Year Plan

113. Dr G.R. South, Professor of Marine Studies at USP, referred participants to Information Paper 18 and outlined the main points of this Five-Year Plan.

114. In response to a query from the Representative of New Caledonia on the equivalence of degrees and diplomas between countries, Dr South explained that there was no system of equivalences and that every case was examined individually.

115. The Representative of Solomon Islands expressed the wish that some countries of the region not be excluded from the hosting of meetings and workshops and further enquired on the retention of the research facility at the USP campus. Dr South advised that the relocation of the Institute of Marine Resources to Solomon Islands would be discussed after presentation of the USP report under Agenda Item 10.

5.3 Establishment of a certificate-level training programme in Fisheries Studies

116. During a discussion involving, among others, the representatives of New Zealand, Kiribati, Tuvalu, Niue and the Solomon Islands, a consensus emerged on the usefulness of introducing such a certificate-level training programme in Fisheries Studies. The Meeting adopted the following recommendation:

Recommendation No.11

The Meeting recommended that the South Pacific Commission, the University of the South Pacific and the Nelson Polytechnic consult together with a view to establishing the feasibility of introducing a Certificate in Fisheries Studies as soon as possible.

AGENDA ITEM 6 – ONE-DAY WORKSHOP: PEOPLE, SOCIETY AND PACIFIC ISLANDS FISHERIES DEVELOPMENT AND MANAGEMENT

117. The workshop occupied a full day of discussions and presentations. The Meeting was advised that a full, detailed report of the workshop would be published by the Commission as a separate document.

118. Workshop participants emphasised the great diversity of traditional fisheries management practices and associated knowledge across the Pacific Islands, and concluded that most SPC member countries would benefit from comparative studies of these practices and this knowledge. They suggested that it would be appropriate for SPC to work towards sharing information on these subjects within and beyond the region, and expressed the opinion that the SPC would be an appropriate vehicle for the publication of issues that would not normally fit in the context of international publications.

119. Participants repeatedly raised the growing problems of reconciling customary law and western law. They agreed on the need for a survey of available information on the various approaches taken by traditional cultures (within and outside the SPC region) to the integration of western laws and traditional customs.

120. Some larger Pacific Island nations contain many customary marine tenure systems about which little is known, and the structures and operations of such systems vary greatly within these countries. Rapid surveys of these systems are needed, especially in order to determine which among them most need further, more detailed studies so as to ensure their continued effective functioning.

121. Pacific Islanders' knowledge of their marine environment (including such phenomena as seasonal, lunar and tide-related migrations and spawning aggregations of various food fishes) can be of exceptional value to government resource managers. This information is no longer always being transmitted effectively from generation to generation in the region. The workshop strongly supported research efforts to record traditional marine environmental knowledge and, where practical, put it to increased use in government marine resource management.

122. Community-based customary marine tenure and associated traditional management systems are facing a number of widespread modern pressures. The workshop strongly supported research on how traditional marine resource management systems respond to such pressures as major demographic changes, commercialisation of marine resources, aquaculture and marine resource enhancement, other coastal developments (including tourism), government marine resource management and enforcement programmes, and to the wider issues of integrated rural development and gender-specific roles in fisheries.

123. The Meeting adopted the following recommendations:

Recommendation No.12

The Meeting recommended that the South Pacific Commission set up a Special Interest Group on traditional marine resource management and knowledge in the SPC region, to provide a focus for collection, discussion and dissemination of information on these subjects.

Recommendation No.13

The Meeting recommended that the Inshore Fisheries Research Project assist, in consultation with member countries and, where appropriate, in collaboration with other regional organisations, in the design and use of customary marine tenure questionnaires, building on the experience of Solomon Islands in their survey of 43 customary marine tenure systems in that country.

AGENDA ITEM 7 – AQUACULTURE AND MARINE RESOURCE ENHANCEMENT

7.1 Introductions of marine species in the Pacific

124. The Senior Inshore Fisheries Scientist stated that, as the relevant background materials had not yet reached the Secretariat, this Agenda Item could not be discussed.

7.2 Quarantine protocols for the transfer of biological material from aquaculture facilities

125. Dr John Lucas, from the James Cook University of North Queensland, referred back to the interim guidelines recommended in 1985 by the 17th RTMF for the introduction and translocation of giant clams (spat preparation precautions, transfer at a very early stage in the life cycle, etc.). He underlined the importance of adequate quarantine procedures and the need to develop standard protocols for the region as a whole.

126. The Representative of Fiji stimulated some discussion by outlining the problems connected with import and export of ornamental and aquarium species and noting the lack of specific regulations on fish and other aquatic species.

127. The Representatives of Australia, Western Samoa, New Zealand, New Caledonia, Kiribati, France, Fiji, USP, FFA and the SPC Secretariat, exchanged information on pathological risks and the environmental impact of harmful and uncontrolled colonisation by introduced species, and agreed that there may ultimately be a need for some sort of regional convention laying down quarantine procedures for the region as a whole. The Representative of New Caledonia pointed out that the Washington Convention already contained many appropriate measures.

128. The Meeting, recognising the importance of these issues, adopted the following recommendation:

Recommendation No.14

The Meeting recommended that SPC approach countries which already have animal quarantine regulations and collect information from appropriate international institutions, in order to compile guidelines and regulations already in use; on the basis of this compilation, a report on quarantine protocols for marine organisms, especially those which are the subject of aquaculture, should be published and circulated to all member countries.

7.3 SPC/SPADP Reef reseeded project

129. The Representative of the FAO South Pacific Aquaculture Development Project, noting the overfishing increasingly occurring in reef environments and the lack of clear marine resource management policies in the region, suggested that reef reseeded with hatchery-produced commercially valuable species might be a reasonable management approach for selected reef and lagoon species. He referred briefly to ongoing attempts being carried out jointly by SPC and SPADP to investigate this potential.

7.4 Trochus reseeded experiment

130. The Representative of SPADP introduced the trochus reseeded trial that had been conducted in Vanuatu within the framework of the SPC/SPADP Trochus Resource Assessment, Development and Management Workshop (May–June 1991).

131. Referring participants to IP.26, the Officer-in-charge of the Vanuatu trochus hatchery outlined the protocol used for reef reseeded with juvenile trochus, detailed the different marking procedures used, and described the encouraging survival rates obtained so far.

132. The Representative of Vanuatu expressed his satisfaction with the results obtained to date and stated that the Fisheries Department would be going on with this reseeded programme.

7.5 Enhancement of spiny lobster populations through habitat modification

133. Dr R.E. Johannes of CSIRO presented Working Paper 10 which described a technique used in the Caribbean region (Cuba and Mexico) for enhancement and capture of rock lobsters. He suggested that preliminary trials might be appropriate to those areas in the SPC region with strong customary marine tenure systems.

7.6 Fifth International Conference on Artificial Habitats for Fisheries

134. The Senior Inshore Fisheries Scientist noted that the Fifth International Conference on Artificial Habitats for Fisheries would be held in the United States in November 1991 and that its organisers would welcome attendance by a delegation of Pacific Island fisheries officers. The Commission had already contacted all member country fisheries departments to invite expressions of interest in nominating participants to such a delegation, but only a small number of responses had been received.

AGENDA ITEM 8 – DEVELOPMENT OF PACIFIC ISLAND PEARL OYSTER RESOURCES

135. The Senior Inshore Fisheries Scientist stressed the increasing interest being shown in the region in this aquaculture activity and indicated that some aid donors might be positively disposed towards pearl-farming projects.

136. The Representative of French Polynesia provided a report on the status of pearl oyster culture in French Polynesia, and conveyed to the Meeting his Government's wish to contribute fully and without reservation to drawing up a policy and a regional programme for co-operation in the field of pearl-shell resources.

137. French Polynesia could contribute in the following ways:

- Survey, appraisal and determination of sites suitable for pearl farming. Consultancies by French Polynesian specialists could be provided, with arrangements to cover the cost of these consultancies being made by SPC. Other conditions would be spelt out in trilateral agreements, between French Polynesia, SPC and the recipient countries;

- Making available SIGMA POE RAVA, a computerised geographic information system for lagoon resource assessment and management that incorporates SPOT satellite imagery.

138. These preliminary steps would make it possible to measure and assess the extent, content and cost of subsequent stages of co-operation. It would also give political decision-makers an instrument for judging whether the proposed activities were feasible or not. The Representative of French Polynesia emphasised the need for a staged approach to the implementation of any future co-operative project.

139. The discussion that followed this presentation enabled the Representatives of Kiribati, the Cook Islands, the Marshall Islands, Western Samoa, Fiji and the Secretariat to raise a number of issues related to pearl farming, in particular:

- The cost of using the SIGMA POE RAVA system for assessment and management of lagoon resources;
- The feasibility of transferring pearl oysters to countries which have few or no natural stocks;
- The possibility of organising an exploratory visit to French Polynesia through the SPC;
- Opportunities for training pearl culture technicians in French Polynesia.

140. During this discussion a pearl culture project being conducted in the Cook Islands, with funding from USAID, was described by the Cook Islands representative.

141. After all the queries and comments from the floor had been dealt with, the Chairman thanked the Representative of French Polynesia on behalf of the Meeting, which adopted the following recommendation:

Recommendation No. 15

The Meeting recommended that the South Pacific Commission follow up French Polynesia's offer to contribute to developing a policy and a regional programme for co-operation in the field of pearl shell resource enhancement.

AGENDA ITEM 9 – ISSUES RELATING TO SAFETY AT SEA IN PACIFIC ISLAND FISHERIES

142. FAO Consultant Mr M. McCoy presented the report titled *Survey of safety at sea issues in Pacific Island artisanal fisheries*.

143. In response to queries from several representatives, he explained that one of the objectives of the study was to gather all the information available in the region on safety at sea; it had appeared necessary to undertake this task because safety conditions varied widely among countries in the region. More specifically-targeted activities would be undertaken subsequently at national level.

AGENDA ITEM 10 – REPORTS BY OTHER ORGANISATIONS

(a) Forum Fisheries Agency (FFA)

144. The FFA Information Officer made a brief presentation on the Agency's work. In addition to on-going support to member countries during access negotiations with DWFNs and

administration of the multilateral Treaty on Fisheries, over the last 12 months FFA had consolidated its activities in areas of legal assistance to EEZ and high seas fisheries issues, including boundary delimitation. The data processing and communications facilities at FFA had expanded to support increased demands by member countries on FFA services for assistance with economic and resource management matters. Research coordination, surveillance and information dissemination continued to develop as important components of the FFA work programme.

145. Negotiations with the United States to discuss future arrangements for U.S. purse seine fishing activities in the region were scheduled for December in Fiji. This meeting would be followed by the Fourth Consultation on Arrangements for Management of South Pacific Albacore Fisheries. With respect to multilateral fishing arrangements, there had been no new developments concerning approaches to Japan but negotiations with the European Community were expected to commence shortly. Member countries would continue to develop mechanisms for the regulation of purse seine fisheries in the region.

146. The Representative conveyed the congratulations of the Director and staff of FFA to Mr Julian Dashwood from Cook Islands on his appointment as SPC Fisheries Co-ordinator. She noted that FFA looked forward to continuing the effective working relationship between FFA and SPC that had continued to evolve for regional benefit in all fisheries issues.

(b) FAO/UNDP (Regional Fishery Support Programme)

147. The Project Manager of the FAO/UNDP Regional Fishery Support Programme outlined activities planned for the near future including responding to country requests, a stock assessment training course, a consultation on interaction in Pacific tuna fisheries, SCUBA risk workshops, follow-up to the Organisational Management Workshop, and the publication of the fisheries address book. The status of the project in the next five-year UNDP cycle was also discussed.

148. After his presentation, a number of representatives extended their appreciation for the work carried out in the region under the Programme and raised the issue of the Programme's continuation for the five-year period starting in 1992.

149. The Meeting felt very strongly that the FAO/UNDP Regional Fishery Support Programme should continue in its present form, administratively independent of other regional organisations, and made the following recommendations:

Recommendation No.16

The Meeting recommended that the South Pacific Commission Secretariat write to the United Nations Development Programme to urge that the FAO/UNDP Regional Fishery Support Programme continue, and that the Secretariat also bring this issue to the attention of the CRGA.

Recommendation No.17

The Meeting recommended that Pacific Island governments stress the need for the continuation of the FAO/UNDP Regional Fishery Support Programme in its present form at the Meeting of Aid Coordinators to be held early in 1992.

(c) International Centre for Living Aquatic Resources Management (ICLARM)

150. The Representative of the International Centre for Living Aquatic Resources Management (ICLARM) referred participants to Information Paper 23 describing the recent activities of the Solomon Islands-based aquaculture centre.

151. During the period from 1 July 1990 to 30 June 1991, in addition to ICLARM's own core funding, the Coastal Aquaculture Centre (CAC) had enjoyed the support of a number of agencies for technical assistance, operating costs, consultancies and major items of equipment: the United Kingdom Overseas Development Administration; the Commonwealth Fund for Technical Cooperation; the Australian International Development Assistance Bureau; the International Centre for Ocean Development; the Skaggs Foundation; the Asian Fisheries Society; Greenpeace; the United Kingdom's Voluntary Service Overseas; and the United States Peace Corps.

152. The CAC's research programme had culminated in the development of an effective farming system for giant clams. By the end of June 1991 about 80,000 juvenile clams were in ocean nurseries or enclosures, of which 8,000 were in village-based ocean nurseries. A field station had been developed at Nusa Tupe, Gizo (Western Province, Solomon Islands), and this now served as ICLARM's primary venue for work on nursery grow-out systems, training and as a distribution point for giant clam seed in the Western Province. A collaborative regional study of predation on giant clams was currently under way.

153. Continuing research at CAC was aimed at investigating the role of different strains of zooxanthellae in the growth and survival of *Tridacna gigas*, the addition of supplementary foods to land-based nursery tanks to boost growth rates, the use of other microfeeds for larval rearing, the feasibility of transferring spat to ocean nurseries at a size <5mm, and the effectiveness of various designs of ocean nursery systems. An investigation into socio-cultural factors affecting the current village-based ocean nursery trials was planned, as well as the preparation of detailed economic analyses of CAC's three-part production system for *Tridacna gigas*. It was hoped a pearl oyster project would be initiated in 1992, but this would be dependent on the availability of funding.

154. Planning for future work at CAC was, to some degree, dependent upon the outcome of ICLARM's bid for entry into the CGIAR (Consultative Group for International Agricultural Research) which, if it was successful, would involve a shift in emphasis of ICLARM's mode of operation toward long-range strategic research. From the view-point of the South Pacific region, the most important proposal was that CAC should become ICLARM's Coral Reef Systems Laboratory, with a research brief covering all aspects of aquaculture, fisheries enhancement, fisheries assessment and management in coral reef systems.

155. Following this presentation, the Representative of French Polynesia drew the Meeting's attention to the problem of coral bleaching in French Polynesia and elsewhere in the region, and added that a team of research workers was investigating this problem. The potential for ICLARM to become involved in this work in the future was noted.

(d) United States Agency for International Development (USAID)

156. The USAID Representative noted that USAID had assisted and would continue to support fisheries development activities in the South Pacific Island countries (PICs) through three major fisheries programmes:

- *The South Pacific Fisheries Development Project* (budget: US\$5.45 million): this supported fisheries-related activities in ten PICs as well as specific fisheries programmes of FFA and SPC. The project started in 1986 and would end on 31 December 1992.
- *The Pacific Islands Marine Resources Project (PIMR)* (budget: US\$12.5 million): a new five-year programme would fund five separate bilateral fisheries activities in Cook Islands, Kiribati, Tonga, Tuvalu, and Papua New Guinea. A new US\$300,000 activity had recently been designed for Fiji and would become the sixth PIMR component.
- *The Fisheries Treaty Programme* (budget: US\$50 million): provided US\$10 million annually for five years as the U.S. Government contribution to the fee payment required under the Treaty. A total of US\$40 million had now been paid to FFA as payment for

the first four years of the Treaty. Under the project assistance component, 74 project proposals had been approved, mainly for fisheries-related activities in Treaty Island countries.

157. The USAID Representative presented the Agency's report (Information Paper 21) and referred to the new economic support fund.

158. The Representative of Western Samoa wished to know whether USAID could in future cover more countries under the economic support fund. In response, the Agency's Representative indicated that changes in USAID strategies had resulted in priority being given to long-term projects, which restricted the number of potential beneficiaries (six countries at the present time).

(e) South Pacific Aquaculture Development Programme (SPADP)

159. The SPADP Representative presented Information Paper 31 and invited countries to make any comments they might have in writing.

160. Some discussion of the activities of the SPADP, and of the future of aquaculture activities in the region generally, followed, and culminated in the adoption of the following recommendation:

Recommendation No.18:

The Meeting recommended that Governments of SPC member countries urge the Food and Agriculture Organization of the United Nations to continue funding the South Pacific Aquaculture Development Programme (SPADP).

(f) International Center for Ocean Development (ICOD)

161. The ICOD Representative referred participants to Information Paper 22 and noted that Canada, through ICOD and CSPODP, had committed just over \$17 million representing 121 projects to the South Pacific islands over the last five years – this from an agency whose total annual budget was just reaching \$13 million this year. ICOD's philosophical approach to ocean development was to foster and support initiatives that help independent developing countries to improve their management and utilisation of ocean resources in a rational and sustainable manner.

162. ICOD focused on small island and coastal countries and regions where ocean resources can have the maximum development impact and where the Centre's limited funds can yield the largest national and regional impact. Presently the Centre was active in four regions: South and West Indian Ocean, West Africa, the Caribbean Basin and the South Pacific.

163. ICOD's mandate encompassed all aspects of ocean resource development and management. Programmes built on specific areas of sectoral expertise in developing countries and regions. The programmes of ICOD had been grouped under several broad themes: integrated ocean management and development, fisheries management and development, mariculture, coastal development and management, non-living resource management and development, marine transportation and ports management, and marine environmental conservation.

164. ICOD had been active in five of these themes in the South Pacific over the past five years although by far the largest support (66.15 per cent for ICOD and 29.93 per cent for CSPODP) had been in the fisheries management and development sector.

165. ICOD was most concerned with the problem of lack of skilled human resources. As a result, it had supported many training initiatives both within the region and within Canada at the

formal academic level and non-formal level. It had supported specialised workshops on technical topics such as computer processing of data, surveillance methodologies, and training programmes in fisheries extension and post-harvest technologies. It was supporting the development of an academic programme in the field of Marine Sciences at the University of the South Pacific to attempt to fill a 'training void' in this subject. The recently completed Human Resource Development Study by SPC, supported by ICOD, was the first in a series of human resource assessments that ICOD hoped to fund to benefit the regional and national governments with respect to the development of action plans and also to assist ICOD in determining where best to place its support in the future, at both bilateral and regional levels.

166. The Representative thanked SPC for inviting ICOD as an observer to this Regional Technical Meeting on Fisheries. He noted that ICOD filled a 'niche' in the donor community which was unique in the world, and one which had a particular relevance to this region which covers so much of the ocean space of the world. ICOD was still a relatively young organisation and as such was still malleable and responsive to expressed needs. It was through attendance at regional meetings such as this, that ICOD was able to gain an insight into the needs of the region.

167. The Representative of Palau thanked ICOD for the valuable work done in his country and hoped that all programmes would be continued.

168. The ICOD Representative responded positively to a request from the Representative of Western Samoa regarding funding of long-term training such as post-graduate studies. He advised countries applying for assistance to submit their requests directly to ICOD or through its office in Suva, Fiji.

(g) University of the South Pacific (USP)

169. The USP Representative noted that his report would be confined to issues relating to IMR, since other aspects concerning USP had been reported under agenda item 5.2.

170. At its May 1990 meeting the USP Council resolved that the IMR should be relocated in Solomon Islands. In April 1991 a Steering Committee met in Honiara to consider the relocation and the move. Members included USP, Solomon Islands Government, ICLARM, FFA, Solomon Islands College of Higher Education (SICHE), SPC and the University of Papua New Guinea.

171. At its meeting, the Steering Committee agreed on the Mission Statement, Strategies and Activities of the IMR (Solomons). Also accomplished was the drafting of a preliminary budget for capital and operating the new IMR, and a timetable for its start-up, commencing in early 1992. A detailed statement outlining potential co-operation between local, regional and international agencies was also drafted.

172. A Scientific Advisory Committee would advise the IMR on programmes and activities, and participants would be invited from SPC, SOPAC, FFA, SPREP, ICLARM and the University of Papua New Guinea. The Committee's first meeting was expected to be held in Honiara in early 1992.

173. Dr South also outlined the new activities to be assigned to the Research and Development Unit in Tarawa. He expressed his appreciation for the support being provided by France to the Coral Reefs programme at IMR, and his desire to co-operate with ORSTOM and EVAAM.

(h) Western Pacific Fisheries Consultative Committee/Trans-Pacific Fisheries Consultative Committee (WPFCC/TPFCC)

174. The WPFCC and TPFCC Representative described these two organisations, which owed their origins to the PECC Fisheries Task Force, and which had been financed by CIDA.

Both were non-governmental bodies devoted to fostering South-South Fisheries co-operation in the Pacific, and both had worked closely with the SPC.

175. The WPFCC, concerned with PIN-ASEAN fisheries cooperation, had been actively involved in PIN-ASEAN tuna research co-operation. The WPFCC was instrumental in enabling the SPC research vessel, the *Te Tautai*, to enter Philippines waters in July 1990 and March/April 1991, and to enter Indonesian waters in March 1991. This was the first time in history that such PIN-ASEAN fisheries co-operation had occurred.

176. As a consequence of this co-operation, a proposal had now been put forward for consideration in which SPC would provide advice and assistance to ASEAN members in conducting future tuna tagging operations. WPFCC would act as co-ordinator and facilitator. He indicated the intention of countries in the South East Asian zone (Philippines and Indonesia) to continue to expand their co-operation with countries in the Pacific zone.

177. The more recently established TPFCC was concerned with co-ordinating fisheries co-operation between the PINs and Pacific Latin America. TPFCC assisted in the organisation of a SPC-led study tour of PIN post-harvest technology specialists to Mexico, Ecuador, Peru and Chile in April, 1991. The purpose of the tour was to identify opportunities for transfers of technology from Pacific Latin America to the PINs. Several opportunities for such transfers were identified. The proposed Pacific Island Regional Post-Harvest Facility was expected to play a pivotal role in the development of future PIN-Pacific Latin American co-operation in post-harvest technology.

178. The Representative of New Zealand commended the PIN-ASEAN tuna research co-operation initiative, but pointed out that SPC fisheries programme resources were currently stretched and that the pros and cons should be carefully considered by a subsequent meeting of RTMF.

179. The WPFCC/TPFCC Representative hoped that a Pacific Island/ASEAN Fisheries Training Workshop could be organised in Noumea with SPC providing the venue. He expressed his gratitude to the Government of France for its willingness to consider providing financial assistance to the Workshop.

(i) Overseas Fisheries Cooperation Foundation (OFCF)

180. The SPC Fisheries Development Associate presented the activities of OFCF as outlined in IP 11. OFCF was established in 1973 with the full support of the Japanese Government and operated several projects of coastal fisheries development in Marshall Islands, Kiribati, Solomon Islands and the Federated States of Micronesia. The new OFCF Suva office, opened in September 1990, ran a project designed to repair and reactivate existing fisheries-related facilities in the region.

181. For the further development of fisheries relations between the island countries and Japan, the OFCF attached Japanese fisheries experts to organisations such as NFC in the Federated States of Micronesia, the Forum Fisheries Agency and the South Pacific Commission. The new co-operative activity with SPC started in June 1991.

(j) Australian Centre for International Agricultural Research (ACIAR)

182. The Representative of ACIAR made a brief presentation describing his organisation. ACIAR was established in 1982 to promote research directed at improving agricultural and fisheries production in developing countries. The Centre contracted research groups in Australia to collaborate with their counterparts in developing countries to study high priority partner developing country problems in fields in which Australia had particular scientific and technical competence.

183. While fisheries had always been an important component of the ACIAR research portfolio, its elevation to full programme status and the recent establishment of a Fisheries Program Coordination Unit, based at the NSW Fisheries Research Institute in Sydney, signalled a corporate commitment to increasing involvement in this area.

184. ACIAR fisheries projects had tended to a geographic focus on the Pacific Islands. Three major projects were ongoing, two of which would terminate in late 1991 or early 1992, as follows:

Giant Clam Mariculture Project

185. This complex multinational project involving collaboration between three Australian institutions (JCU, AIMS, QDPI) and seven developing country partners (Cook Islands, Fiji, Kiribati, Philippines (2), Tonga and Tuvalu) would effectively terminate in January 1992, representing a six-year commitment by ACIAR to giant clam mariculture.

186. With the technical feasibility of giant clam mariculture effectively demonstrated during the Phase 1 project, this second phase had focused on the development of farming technologies appropriate for developing countries in South-East Asia and the Pacific Islands, assisting collaborating countries with research directed at stock assessment and management of wild populations, and, where required, the reintroduction of locally extinct species. The results achieved to date remain impressive. The progress reported by some of the developing country partners was particularly encouraging, as was the high level of interest and commitment to clam mariculture in these countries.

Tuna Baitfish Project

187. This three-year, second phase project, co-ordinated through the Cleveland Laboratory of CSIRO, was initiated in the current financial year and involved extensive field studies of the tuna baitfisheries in Fiji and Kiribati. Biological data and fisheries statistics from the large Solomon Islands baitfishery were also being re-analysed to refine stock size estimates and management advice generated during the earlier phase.

188. The re-analysis of length-frequency data from the Solomon Islands was proceeding satisfactorily. Intensive field studies in Kiribati were concluded recently (March), and ACIAR Project officer Nick Rawlinson would relocate to Fiji in September to initiate the Fiji country programme.

Underwater visual assessment of reef fish stocks

189. This project, of 18 months duration, was designed to examine the utility of underwater visual census as a research tool for the assessment of standing stocks of exploited tropical coral reef fish species. Field research at selected sites on the Australian Great Barrier Reef and in Fiji had been completed and a final report was now in preparation by the Queensland Department of Primary Industry.

190. New areas for ACIAR involvement in the fisheries sector were being investigated actively with the intention of utilising, where appropriate, grant-funded pilot studies to establish the feasibility of proposed projects which appeared promising and to identify more clearly both the potential problems which must be countered and the benefits which could accrue to the partner countries and institutions.

191. ACIAR was actively seeking to develop closer links with SPC and with other regional bodies with an involvement or interest in agriculture and fisheries. In line with this the Great Barrier Reef Marine Park Authority (GBRMPA) was commissioned to undertake a study of the utilisation of remote sensing information in the South Pacific. GBRMPA specialist Dr Dan Claasen collaborated actively with a major regional remote sensing study commissioned by SPC: this recommended a number of initiatives to improve access by Pacific Island countries to information generated by remote sensing systems, and to assist them to apply this information effectively.

192. Several other promising initiatives for joint SPC/ACIAR action were under active examination, including the novel tuna products project referred to earlier by the SPC Post-harvest Fisheries Adviser and a possible regional research initiative on pearl shell and pearl culture.

(k) Institut français de recherche scientifique pour le développement en coopération (ORSTOM)

193. The representative of ORSTOM presented WP 22, which described the activities relative to fisheries research carried out by ORSTOM within the region and outlined the most significant results obtained during the past year.

AGENDA ITEM 11 – OTHER BUSINESS

194. The Chairman asked participants to suggest a theme for discussion at the next Regional Technical Meeting on Fisheries. Three themes were suggested: the role of women in fisheries; post-harvest fisheries sectors; and strategies for management of mollusc resources. The Meeting finally decided to let the Secretariat choose between these or other appropriate themes.

195. The Representative of Western Samoa stated that there was a need to review the frequency of the Regional Technical Meeting on Fisheries and asked that this issue be included in the Agenda for the next Meeting. He added that he would prepare a working paper on the subject.

196. It was noted that the Meeting had not had the opportunity to discuss in detail, and put in order of priority, the three projects that the Secretariat intended to submit for EC funding consideration later in the year. Some discussion took place during which it emerged that, because of differing priorities at the national level and because delegates had not been provided with adequately detailed background information to enable careful comparison of project benefits, a consensus from this meeting was unlikely.

197. In view of this difficulty, the meeting requested the Secretariat to forward summary documentation on each project to SPC member governments so that they could determine relative priorities from a national viewpoint. The Secretariat undertook to do this as soon as possible, and to collate responses and provide a summary to member countries for comment before the final submission to EC was made.

198. The Secretariat reiterated the point that prioritisation was only for purposes of EC funding. The Commission remained fully committed to all three projects and would continue its endeavours to obtain the funding necessary for the implementation of each.

199. The Chairman was asked to convey the sentiments of the Meeting in paying tribute to Mr Barney Smith, the former SPC Fisheries Coordinator, in the form of a letter, for the work he had accomplished and the dedication he had shown over the ten years he spent serving the region. The Meeting also extended a sincere welcome to his successor, Mr Julian Dashwood from the Cook Islands.

AGENDA ITEM 12 – CLOSING FORMALITIES

200. The meeting examined the draft report page by page. After numerous amendments and further discussion of some items, the report was adopted by the meeting.

201. The Chairman expressed thanks to the Vice-Chairman, the drafting committee, participants and the various departments of the Secretariat who had collaborated to enable the meeting to be completed successfully, despite the very heavy agenda and timetable. He then declared the meeting closed.

IV. RECOMMENDATIONS

Recommendation No. 1

In order to facilitate the role of the Standing Committee on Tuna and Billfish in providing technical review of the work of the Tuna and Billfish Assessment Programme for the RTMF, the Meeting endorsed the recommendation of the Fourth Standing Committee on Tuna and Billfish that the Tuna and Billfish Assessment Programme prepare and distribute to Standing Committee on Tuna and Billfish members prior to each meeting:

- a detailed description of any proposed new activities,
- a projected work plan for the year.

Recommendation No. 2

The Meeting endorsed the recommendation of the Fourth Standing Committee on Tuna and Billfish that a detailed operational plan for 1992–1996 be developed by the Tuna and Billfish Assessment Programme and distributed in advance of the Fifth Standing Committee on Tuna and Billfish for evaluation by that meeting.

Recommendation No. 3

The Meeting recommended that the South Pacific Commission assist Pacific Island countries to make use of remote sensing and image processing in survey work on trochus and other marine resources, especially benthic invertebrates.

Recommendation No. 4

The Meeting recommended that the South Pacific Commission establish a new Special Interest Group (SIG) on shells and the shell trade, focusing especially on trochus.

Recommendation No. 5

The Meeting recommended that the South Pacific Commission carry out a detailed study of the Aitutaki trochus fishery as a case study, in order to provide management-related information that will be applicable to the developing fisheries in other atolls of the region.

Recommendation No. 6

The Meeting recommended that the South Pacific Commission encourage the adoption of standardised survey techniques for trochus and other benthic marine invertebrates in Pacific Island countries, so as to enable comparison of results by different workers and from different areas.

Recommendation No. 7

The Meeting recommended that the South Pacific Commission request the Government of France to provide continued support for the SPC component of the PIMRIS project, and continue its attempts to identify funding for long-term attachment of national information officers to the Project as a means of establishing and strengthening national-level PIMRIS activities.

Recommendation No. 8

The Meeting recommended that the Secretariat make all the necessary arrangements to enable the practical module of the SPC/Nelson Polytechnic Pacific Island Fisheries Officers Course to be held in Vanuatu in 1992.

Recommendation No. 9

The Meeting accepted that there was a need for improved co-ordination of education and training within the region. The Meeting recommended that SPC, by the most appropriate means and as soon as possible, obtain the views of donors, educational institutes and regional agencies, in order to determine how best to achieve that improvement, and report to member governments on the outcome of these consultations.

Recommendation No. 10

The Meeting recommended publication of the regional report in the form of an SPC Technical Publication, and publication of the country reports, subject to authorisation from governments within a period of 12 weeks. As many of the recommendations of the report lie beyond the scope of the Regional Technical Meeting on Fisheries to address, it was further recommended that the report be distributed widely within the region (government central agencies, donors, educational institutions, education departments) and that SPC seek the views of these recipients as to the value of the recommendations.

Recommendation No. 11

The Meeting recommended that the South Pacific Commission, the University of the South Pacific and the Nelson Polytechnic consult together with a view to establishing the feasibility of introducing a Certificate in Fisheries Studies as soon as possible.

Recommendation No. 12

The Meeting recommended that the Inshore Fisheries Research Project set up a Special Interest Group on traditional marine resource management and knowledge in the SPC region, to provide a focus for collection, discussion and dissemination of information on these subjects.

Recommendation No. 13

The Meeting recommended that the Inshore Fisheries Research Project assist, in consultation with member countries and, where appropriate, in collaboration with other regional organisations, in the design and use of customary marine tenure questionnaires, building on the experience of Solomon Islands in their survey of 43 customary marine tenure systems in that country.

Recommendation No. 14

The Meeting recommended that SPC approach countries which already have animal quarantine regulations and collect information from appropriate international institutions, in order to compile guidelines and regulations already in use; on the basis of this compilation, a report should be published and circulated to all member countries.

Recommendation No. 15

The Meeting recommended that the South Pacific Commission follow up French Polynesia's offer to contribute to developing a policy and a regional programme for co-operation in the field of pearl shell resource enhancement.

Recommendation No. 16

The Meeting recommended that the SPC Secretariat write to the United Nations Development Programme to urge that the FAO/UNDP Regional Fishery Support Programme continue, and that the Secretariat also bring this issue to the attention of the Committee of Representatives of Governments and Administrations.

Recommendation No. 17

The Meeting recommended that Pacific Island governments stress the need for the continuation of the FAO/UNDP Regional Fishery Support Programme in its present form at the Meeting of Aid Coordinators to be held early in 1992.

Recommendation No. 18

The Meeting recommended that Governments of SPC member countries urge the Food and Agriculture Organization of the United Nations to continue funding the South Pacific Aquaculture Development Programme (SPADP).

V. LIST OF WORKING PAPERS PRESENTED TO THE MEETING

- WP.1 SPC Fisheries Programme overview
- WP.2 Report on the SPC's Tuna and Billfish Assessment Programme activities
- WP.3 Fourth Standing Committee on Tuna and Billfish (Draft Report)
- WP.4 Tuna and Billfish Assessment Programme Draft Strategic Plan 1992–1996 (as amended by SCTB4)
- WP.5 Report on SPC's Coastal Fisheries Programme activities in 1990–1991
- WP.6 Human Resource Development and Planning in the Pacific Islands Fisheries Sector (Draft Report)
- WP.6/Add. 1 Recommendations of the Human Resource Development Study
- WP.7 Traditional marine conservation in Tokelau – Can it be adapted to meet today's situation?
- WP.8 Women in fisheries development
- WP.9 Report of the Fourth Pacific Islands Marine Resources Information System (PIMRIS) Steering Committee Meeting
- WP.10 Artificial shelters for enhancement of rock lobster fisheries
- WP.11 The value today of traditional management and knowledge of coastal marine resources in Oceania
- WP.12 Regional Post-harvest Facility – Progress Report of the RPHF Planning Group
- WP.13 Considerations related to the transfer of biological material from aquaculture facilities

Information Papers

- IP.1 Tuna and Billfish Assessment Programme Draft Strategic Plan 1992–1996
- IP.2 Country Statement – Kingdom of Tonga
- IP.3 Country Statement – Federated States of Micronesia
- IP.4 Country Statement – New Caledonia
- IP.5 Country Statement – American Samoa
- IP.6 Country Statement – Solomon Islands
- IP.7 African aid – How not to help
- IP.9 Preliminary bibliography of Pacific Island traditional fishery practices
- IP.10 Country Statement – Western Samoa

- IP.11 Overseas Fishery Cooperation Foundation (OFCF) of Japan
- IP.12 Regional Post-harvest Facility – Progress report of the RPHF planning group
- IP.13 Country Statement – Guam
- IP.14 Women and fishing in traditional Pacific island cultures
- IP.15 Country Statement – French Polynesia
- IP.16 Country Statement – Australia
- IP.17 Country Statement – Tuvalu
- IP.18 University of the South Pacific Marine Studies Programme – Five-year Plan
- IP.19 Country Statement – Tokelau
- IP.20 Country Statement – Palau
- IP.21 Up-dates on USAID fisheries programmes
- IP.22 International Centre for Ocean Development – South Pacific region
- IP.23 International Center for Living Aquatic Resources Management – South Pacific Office and Coastal Aquaculture Centre
- IP.24 Country Statement – Northern Mariana Islands
- IP.25 Using customary practices in marine resource and coastal management in Yap State – Federated States of Micronesia
- IP.26 Trochus reseeded experiment in Vanuatu
- IP.27 FAO/UNDP Regional Fishery Support Programme – Work of the Programme April 1990 to August 1991
- IP.28 A country review on women-in-fisheries component of the DFMR – PNG
- IP.29 Resources owners as implementing agencies of Papua New Guinea coastal marine resources management regulations
- IP.30 Conflict resolution in the development of the Cook Islands pearl industry
- IP.31 Aquaculture development in the South Pacific: strategy, status and future approach
- IP.32 The New Zealand School of Fisheries

VI. LIST OF PARTICIPANTS

American Samoa

Mr Phil Langford
Deputy Director
Department of Marine and Wildlife
Resources
P.O. Box 3730
PAGO PAGO

Australia

Dr Russell Reichelt
Director (Fisheries Resources Branch)
Bureau of Rural Resources
P.O. Box E11
Queen Victoria Terrace
Parkes ACT 2600

Cook Islands

Mr Julian Dashwood
Secretary
Ministry of Marine Resources
P.O. Box 85
RAROTONGA

Mr Nooroa Roi
Ministry of Marine Resources
P.O. Box 85
RAROTONGA

Federated States of Micronesia

Mr Bernard Thoulag
Deputy Director
Micronesian Maritime Authority
P.S. 120
Kolonia
POHNPEI 96941

Dr Andrew Smith
Marine Resource Adviser
Marine Resources and Management Division
Department of Resources and Development
P.O. Box 251
YAP 96943

Fiji

Dr Tim Adams
Acting Director of Fisheries
Fisheries Division
Ministry of Primary Industries
P.O. Box 358
SUVA

Mr Krishna Swamy
Acting Principal Fisheries Officer (R and D)
Fisheries Division
Ministry of Primary Industries
P.O. Box 358
SUVA

France

Mr Alain Gouhier
 Second délégué de la France
 auprès de la Commission du Pacifique Sud
 B.P. 8043
 NOUMEA
 New Caledonia

Mr Renaud Pianet
 Océanographe biologiste
 Centre ORSTOM de Nouméa
 B.P. A5
 NOUMEA CEDEX
 New Caledonia

French Polynesia

Mr Philippe Siu
 Chef du département pêche
 Etablissement pour la valorisation des
 activités aquacoles et maritimes (EVAAM)
 B.P. 20
 PAPEETE, Tahiti

Guam

Mr Rufo Lujan
 Chief
 Division of Aquatic and Wildlife Resources
 Dept of Agriculture
 P.O. Box 2950
 AGANA 96910

Ms Dorothy P. Harris
 Division of Economic Development and
 Planning
 Department of Commerce
 590 S. Marine Drive
 Tamuning 96911

Kiribati

Mr Teekabu Tikai
 Chief Fisheries Officer
 Fisheries Division
 Ministry of Natural Resources and Development
 P.O. Box 276
 BIKENIBEU, Tarawa

Mr Being Yeeting
 Senior Fisheries Officer
 Fisheries Division
 Ministry of Natural Resources and Development
 P.O. Box 276
 BIKENIBEU, Tarawa

Marshall Islands

Mr Danny Wase
 Director
 Marshall Islands Marine Resources Authority
 Ministry of Resources and Development
 P.O. Box 860
 MAJURO 96960

New Caledonia

Mr Régis Etaix-Bonnin
Ingénieur halieute
Service territorial de la marine marchande et
des pêches maritimes
B.P. 36
NOUMEA

Mr Hervé Bru
Chef du Service des pêches
Province Nord
B.P. 41
KONE

Mr Marc Daguzan
Responsable de la section pêche
Province des Iles
B.P. 1014
NOUMEA

Mr Bernard Fao
Animateur des pêches
Service de la mer
Province Sud
B.P. 295
NOUMEA

New Zealand

Dr Talbot Murray
Research Group Leader
Pelagic and Inshore Fisheries Research Group
MAF Fisheries
Ministry of Agriculture and Fisheries
P.O. Box 297
WELLINGTON

Niue

Mr Sioneheke Leolahi
Fisheries Officer
P.O. Box 74
Government of Niue
ALOFI

Northern Mariana Islands

Mr Calistro Falig
Fisheries Biologist
Division of Fish and Wildlife
Department of Natural Resources
CNMI Government
SAIPAN MP 96950

Palau

Mr Noah Idechong
Chief
Marine Resources Division
Bureau of Resources and Development
P.O. Box 100
KOROR 96940

Mr Masubed Tkel
 Fisheries Officer
 Marine Resources Division
 Bureau of Resources and Development
 P.O. Box 100
 KOROR 96940

Papua New Guinea

Mr Molean Chapau
 Fisheries Biologist
 Kavieng Research Station
 Department of Fisheries and Marine Resources
 P.O. Box 377
 KAVIENG

Ms Walete Wararu
 Department of Fisheries and Marine Resources
 P.O. Box 165
 KONEDOBU

Mr Elias Wohengu
 Department of Foreign Affairs
 Post Office
 Wards Strip
 WAIGANI

Solomon Islands

Mr Sylvester Diake
 Principal Fisheries Officer (Resources
 Management)
 Fisheries Division
 Ministry of Natural Resources
 P.O. Box G24
 HONIARA

Tokelau

Mr Kirifi Kirifi
 Agriculture and Fisheries
 Office for Tokelau Affairs
 P.O. Box 865
 APIA
 Western Samoa

Tonga

Mr Sione Mangisi
 Director of Fisheries
 Ministry of Fisheries
 P.O. Box 871
 NUKU'ALOFA

Tuvalu

Mr Sautia Maluofenua
 Director of Fisheries
 Fisheries Division
 Ministry of Natural Resources Development
 P.O. Box 70
 FUNAFUTI

Mr Satalaka Petaia
 Fisheries Officer
 Fisheries Division
 Ministry of Natural Resources Development
 P.O. Box 70
 FUNAFUTI

United States of America

Mr William Gibbons Fly
 Office of Fisheries Affairs
 Bureau of Oceans and International
 Environmental and Scientific Affairs
 Department of State
 WASHINGTON, DC 20520-7818

Mr Elisala Pita
 Fisheries Adviser
 South Pacific Regional Development Office
 U.S. Agency for International Development
 P.O. Box 218
 SUVA
 Fiji

Mr Raymond P. Clarke
 National Marine Fisheries Service (NMFS)
 2570 Dole St. Room 105
 HONOLULU
 Hawaii 96822

Vanuatu

Mr Wycliff Bakeo
 Director of Fisheries
 Fisheries Department
 Private Mail Bag 045
 PORT VILA

Mr Moses Amos
 Fisheries Department
 Private Mail Bag 045
 PORT VILA

Wallis and Futuna

Mr Daniel Tahimili
 Boatyard manager
 Service territoriale de la pêche
 Service de l'économie rurale
 B.P. 19
 MATA'UTU

Western Samoa

Mr Ueta Fa'asili
 Chief Fisheries Officer
 Fisheries Division
 Dept of Agriculture, Forests and Fisheries
 P.O. Box 1874
 APIA

OBSERVERS**Australian Centre for International
Agricultural Research (ACIAR)**

Mr Barney Smith
 Research Programme Coordinator (Fisheries)
 Australian Centre for International Agricultural
 Research (ACIAR)
 C/- NSW Fisheries Research Institute
 P.O. Box 21
 CRONULLA
 New South Wales 2230
 Australia

**FAO/UNDP Regional Fishery
Support Programme**

Mr Robert Gillett
 Project Manager
 FAO/UNDP Regional Fishery Support
 Programme
 UNDP Private Mail Bag
 SUVA
 Fiji

Mr Mike McCoy
 Fisheries Adviser
 FAO/UNDP Regional Fishery Support
 Programme
 UNDP Private Mail Bag
 SUVA
 Fiji

**FAO/South Pacific Aquaculture
Development Project**

Mr Hideyuki Tanaka
 Project Manager/Regional Aquaculturist
 South Pacific Aquaculture Development
 Project
 UNDP Private Mail Bag
 SUVA
 Fiji

Forum Fisheries Agency (FFA)

Mr Andrew Wright
 Research Co-ordinator
 Forum Fisheries Agency
 P.O. Box 629
 HONIARA
 Solomon Islands

Ms Bette Kirchner
 Information Officer
 Forum Fisheries Agency
 P.O. Box 629
 HONIARA
 Solomon Islands

**International Centre for Living
Aquatic Resources Management**

Ms Lucy Gilkes
 ICLARM South Pacific Office
 P.O. Box 438
 HONIARA
 Solomon Islands

**International Centre for Ocean
Development (ICOD)**

Mr Ronald Archer
Program Officer
South Pacific and Caribbean Basin Division
International Centre for Ocean Development
5670 Spring Garden Road
9th Floor
HALIFAX
Nova Scotia
Canada B3J 1H9

**Institut français de recherche
scientifique pour le développement
en coopération (ORSTOM)**

Mr René Grandperrin
Biologiste
Centre ORSTOM de Nouméa
B.P. A5
NOUMEA CEDEX
New Caledonia

Mr G. David
Fisheries Department Research Unit
ORSTOM
Private Mail Bag 045
PORT VILA
Vanuatu

James Cook University

Dr John Lucas
Associate Professor
James Cook University of North Queensland
TOWNSVILLE
Queensland 4811
Australia

Nelson Polytechnic School of Fishing

Mr Alastair Robertson
Head
School of Fishing
Nelson Polytechnic
Private Mail Bag
NELSON
New Zealand

Mr Chris Turner
School of Fishing
Nelson Polytechnic
Private Mail Bag
Nelson
New Zealand

**South Pacific Applied Geoscience
Commission**

Ms Heather Creech
Librarian
South Pacific Applied Geoscience
Commission (SOPAC)
Private Mail Bag
SUVA
Fiji

University of British Columbia

Prof. Gordon Munro
 (PECC Fisheries Task Force)
 Department of Economics
 University of British Columbia
 VANCOUVER
 British Columbia
 Canada V6T 1Y2

University of Hawaii at Manoa

Dr Richard Shomura
 Hawaii Institute of Geophysics
 School of Ocean and Earth Science
 and Technology
 University of Hawaii at Manoa
 2525 Correa Road
 HONOLULU
 Hawaii 96822
 United States of America

University of Technology (Queensland)

Dr Peter Mather
 School of Life Science
 Queensland University of Technology
 BRISBANE 4001
 Australia

University of the South Pacific

Prof. R. South
 Professor of Marine Studies
 University of the South Pacific
 P.O. Box 1168
 SUVA
 Fiji

Mr Ganeshan Rao
 PIMRIS Coordinator
 USP Library
 University of the South Pacific
 P.O. Box 1168
 SUVA
 Fiji

CONSULTANTS

Mr Robert Johannes
 Division of Fisheries Research
 Commonwealth Scientific and Industrial
 Research Organisation (CSIRO)
 GPO Box 1538
 HOBART
 Tasmania
 Australia 7001

Mr Paul Sutherland
 Director General
 Central and Arctic Region
 Fisheries and Oceans Canada
 Freshwater Institute
 501 University Cr
 WINNIPEG
 Canada, R3T 2N6

Dr Kenneth Ruddle
 Centre for Development Studies
 University of Bergen
 BERGEN
 Norway

Dr Edvard Hviding
 Centre for Development Studies
 University of Bergen
 BERGEN
 Norway

PRIVATE INDIVIDUALS/ORGANISATIONS

Mr Jacques Moret
 Architecte naval
 B.P. 2602
 NOUMEA
 New Caledonia

Mr Hiroyoki Chagi
 Aquaculture Expert to Fiji
 JICA Private Mail Bag
 SUVA
 Fiji

Dr Barry Goldman
 Research Associate
 Australian Museum
 P.O. Box A285
 SYDNEY
 New South Wales 2000
 Australia

SPC SECRETARIAT

Mr Atanraoi Baiteke, O.B.E.
 Secretary-General

Mrs Hélène Courte
 Director of Programmes

Mr Vaasatia Poloma Komiti
 Deputy Director of Programmes

Mr Garry Preston
Senior Inshore Fisheries Scientist
(Meeting Director)

Dr Antony Lewis
Chief Fisheries Scientist

Dr John Hampton
Principal Fisheries Scientist

Mr Peter Cusack
Fisheries Development Officer

Mr Steve Roberts
Post-harvest Fisheries Adviser

Dr Marc Labelle
Senior Fisheries Scientist

Mr Kevin Bailey
Fisheries Scientist

Mr Paul Dalzell
Inshore Fisheries Scientist

Mr Jean-Paul Gaudechoux
Fisheries Information Officer

Ms Shirley Steele
Women's Fisheries Programme Officer

Mr Masanami Izumi
Fisheries Development Associate

Mr Russell Price
TBAP Programmer/Research Officer

Mr Joel Opnai
Fisheries Scientist

Mr Michel Blanc
Fisheries Training Associate

Mr Tuainetai Rata
Masterfisherman

Mr Peter Watt
Masterfisherman

Mr Paxton Wellington
Masterfisherman

Mrs Veronica Logez
Fisheries Research Officer

Mrs Helen Wolfgramm-Page
Secretary/Fisheries Coordinator

Mrs Kay Legras
Project Assistant/Inshore Fisheries Research
Project

Mrs Marie-Ange Bao
Project Assistant/Deep Sea Fisheries
Development Project

Mr Patrick Cowan
Manager Interpretation/Translation Section

Mr Roy Benyon
Interpreter

Mr Claude Colomer
Interpreter

Mrs Marina Laplagne
Translator

Ms Valérie Hassan
Interpreter

Mr Désiré Ahouanmenou
Translator

Mr Pierre Pellerin
Translator

Ms Anne Dubois
Secretary/Interpretation/Translation Section